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5(2) 125(1) PHASE I BOOK EXPLOITATION SOV/233

Atadasiya nauk SSSR, Institut mashinovedeniya

Povysheniye stoykosti detalей машин /sul'fidirovaniye/; sbornik statей (Increasing the Wear Resistance of Machine Parts /Sulfurization/; Collection of Articles) Moscow, Mashgiz, 1959. 126 p. Errata slip inserted. 4,500 copies printed.

Ed. (Title page): N. M. Kurushchov, Doctor of Technical Sciences; Ed. (Inside book): A. G. Miltin, Engineer; Tech. Ed.: V. D. Kuznetsov, Engineer; Ed. for literature on General Technical and Transport Machine Building (Mashgiz): E. A. Rozumova, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical workers of machine-building and overhauling plants.

COVERPAGE: This book presents results of investigations of methods to increase the resistance of machine parts to wear. A new method of sulfurization which improves the friction behavior of cast-iron and steel and an analysis of the effect of sulfurization on the anti-friction properties and wear of metal are given.

These articles are the transactions of a seminar held at the Institute of Mechanical Engineering of the Academy of Sciences, USSR, in December 1956.

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Zinovich, M.S., Engineer. Investigation of the Sulfurization Process. The author discusses sulfurization in the liquid bath, baths operating at medium and low temperatures, control of the process, x-ray and metallographic investigations, hardness, work-in, and wear resistance tests. 79

Zelenova, V., Engineer. X-ray Analysis of the Surface Layer of Sulfurized Specimens. The author investigated various bath compositions by x-ray analysis in order to evaluate the character of sulfurization in respect to simultaneous formation of nitrides. 95

Gill'man, T.P., Engineer. Sulfurization of Iron Carbide With Gas99 The author describes a process in which a sulfur suspension in kerosene oil and ammonia are introduced together into the furnace. This process is a combined sulfurizing and oxidizing process having several advantages in comparison with other sulfurization methods according to the author.

Gill'man, T.P., Engineer. Sulfurization of Bushings Made of Iron Powder by Introducing Sulfur into the Charge Method. The author describes the results of experiments using a method claimed by the author to be new. The work was carried out at Stalingrad Tractor Plant in collaboration with MZTI (Automobile and Tractor Scientific Research Institute). The author stresses the advantages of this process which gives a uniform distribution of sulfides in the metal. 105

ZELENOVA, V. D., Candidate Tech Sci (diss) -- "Investigation of phase transformations in martensite and austenite powders". Moscow, 1959. 16 pp (Main Admin of Sci Res and Design Organizations of the Gosplan USSR, Central Sci Res Inst of Ferrous Metallurgy TsNIIChermet), 110 copies (KL, No 24, 1959, 136)

AUTHORS: Gulyayev, A.P. and Zelenova, V.D. SOV/126-8-3-31/33

TITLE: Investigation of the Pearlitic Transformation of Isolated Austenite Powder

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 3, pp 475-476 (USSR)

ABSTRACT: The method of isolated austenite powder manufacture from a quenched steel by anodic solution has been described by Zelenova (Ref 1). In this paper the results of a study of the pearlitic transformation of isolated austenite are given. This transformation was studied in powder separated by electrolytic solution from the quenched steel Kh12F1 (1.49% C, 12% Cr, 0.28% V). The isothermal transformation diagrams of austenite for the quenched steel Kh12F1 and for isolated austenite separated from this steel were compared. Isothermal decomposition curves for powder and solid specimens were plotted by means of an anisometer of the N.S.Akulov system for which purpose the austenite powder and solid specimens were heated to, and soaked in, the temperature range 300 to 700°C. The powder obtained by electrolytic solution of the steel was transferred to a quartz tube with a ground cork stopper.

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In order to obtain the isothermal decomposition curve of austenite for the solid specimen, the latter was also placed in a quartz tube in order to ensure, as far as possible, identical conditions of heating to a constant temperature. The solid specimens and powders were, after soaking in the isothermal bath, also investigated by X-rays. In the investigation of the steel Kh12F1 an isothermal transformation of austenite in the solid specimen, as well as in the powder, has been observed in the pearlitic transformation range. The isothermal decomposition of austenite diagrams for the solid specimen and for the powder are shown in the figure on p 476. X-ray photographs, taken of the powder prior to isothermal soaking, show only austenite lines consisting of separate point reflections. X-ray photographs taken of the powder after isothermal treatment show continuous diffraction lines of the α -lattice. The X-ray pictures are identical for the powder and the solid specimens. The authors conclude that the essential difference between isolated austenite and that of the solid specimen in the

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initial condition is the fact that secondary stresses are absent in powder made by electrolytic solution of quenched steel. There are 1 figure and 2 Soviet references.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut (Central Motor Vehicle and Engine Scientific Research Institute)

SUBMITTED: February 10, 1959

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SOV/126-8-3-32/33

AUTHORS: Gulyayev, A.P. and Zelenova, V.D.

TITLE: Investigation of the Intermediate Transformation of Isolated Austenite Powder

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 3, pp 476-478 (USSR)

ABSTRACT: Gulyayev et alii (Ref 1) have shown that no martensitic transformation occurs in monocrystalline austenite powder made by electrolytic solution of quenched steel. The aim of this work was to establish the characteristics of the isolated austenite transformation in the intermediate temperature range and compare them with those of a solid specimen. The intermediate transformation of isolated austenite was studied in powder separated by electrolytic solution from quenched 144Kh3 steel (1.44% C, 3.45% Cr, 0.21% Si, 0.36% Mn). The investigation of the isothermal transformation of austenite of the quenched 144Kh3 steel and the separated electrolytic deposit was carried out with an anisometer of the N.S.Akulov system. Isothermal decomposition curves were plotted at 300 and 400°C. Specimens of the quenched steel and of the electrolytic deposit were heated in the

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anisometer bath and held there for different periods of time after which they were quenched in water. For solid specimens of the above steel, a transformation was observed in the temperature range 300 to 400°C. The isothermal decomposition of austenite curve at 400°C is shown in the figure on p 477. An X-ray investigation of the electrolytic deposit has shown that a small increase in magnetic induction of the powder as the result of soaking at the intermediate transformation temperature is due to the formation of Fe_3O_4 . X-ray photographs of the powder after isothermal soaking are analogous to those taken of the original powder, except for the oxide lines. Thus, as in the case of the martensitic transformation, there is no intermediate transformation of isolated austenite obtained by electrolytic solution, whereas in the solid specimen it takes place in the usual way. The transformation of austenite in the medium temperature range has common characteristics with the martensitic transformation. This has led to the idea that the transformation in the medium temperature range

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passes through martensite formation. Such a point of view has been expressed by Shtoinberg (Ref 3), Minkovich (Ref 4) and Kurdyumov (Ref 5). The absence of transformation in isolated austenite in the intermediate transformation temperature range confirms the hypothesis of the martensitic nature of the $\gamma \rightarrow \alpha$ change in the bainite transformation. There are 1 figure and 5 Soviet references.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut (Central Motor Vehicle and Engine Scientific Research Institute)

SUBMITTED: February 10, 1958

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VINOGRADOV, Yu.M., kand.tekhn.nauk; ZELENOVA, V.D., inzh.;
SHISHOKINA, K.V., kand.tekhn.nauk

Using X-ray diffraction and electron diffraction examination
in investigating wear-resistant coatings. Trudy NIIKHIMMASH
no.27:168-175 '59. (MIRA 14:8)
(Protective coatings--Testing) (X rays--Diffraction)
(Electron diffraction examination)

GULYAYEV, A.P.; ZELENOVA, V.D.

Investigating martensite transformation in isolated austenite of carbon free iron alloys. Fiz. met. i metalloved. 9 no. 4:525-529 Ap '60.
(MIRA 14:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii i Tsentral'nyy nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.

(Steel---Metallography)

18.7500

78122

SOV/129-60-30-1/16

AUTHORS:

Gulyayev, A. P. (Doctor of Technical Sciences, Professor),
and Zelenova, V. D. (Candidate of Technical Sciences)

TITLE:

Distribution of Carbon in Case-Hardened Layer of Alloy
Steels

PERIODICAL:

Metallovedeniye i termicheskaya obrabotka metallov,
1960, Nr 3, pp 2-7 (USSR)

ABSTRACT:

This is a report concerning an investigation of steel 18KhGT containing 0.21% C, 1.07% Mn, 0.29% Si, 1.03% Cr, and 0.15% Ti. Some additional experiments were conducted with steel 1Kh13 (0.1% C; 13% Cr) and steel 1Kh17N2 (0.1% C; 17% Cr; 2% Ni). For comparison steel 20 (0.2% C) was investigated. The samples of steel 18KhGT (10 x 10 x 20 mm) were case-hardened in the solid carburizing agent at 920° C over a period of 3 and 6 hr. After case-hardening, some samples were quenched in oil with precooling (for precooling the samples were swiftly carried from case-hardening box

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to the box with carburizing agent, heated to 850°C , and held for 1 hr). The other samples were quenched, without precooling, either in oil or in 10% water solution of NaOH. Sharp hardening was applied to prevent the disintegration of martensite during the cooling. The samples of steel 20 were treated in the same manner. The high-chromium steels were carburized in gas atmosphere at 950°C for a period of 15 hr, then quenched from $1,100^{\circ}\text{C}$ and given additional treatment at -70°C . The treated samples were subject to "in-layers" roentgenographic and chemical analyses. The experiments showed that there are two types of different distributions of carbon in case-hardened layer: "normal" distribution as in steel 20, Kh13 and Kh17; and "abnormal" as in steel 18KhGT (the abnormal distribution of carbon seemingly is observed in other low-alloy case-hardened steels; such a distribution was detected in steel 12KhN3A). The "normal" distribution is characterized by the maximum concentration of carbon on the surface and a gradual lowering of its content

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away from the surface. The "abnormal" distribution of carbon is characterized by the maximum content of carbon in the solution located not on the surface but at some distance away from it (though total carbon content in the layer shows maximum on the surface). Therefore there is a layer on the surface in which total carbon content is larger than its content in the solution. The excess carbon is found in carbides. All experiments are described and discussed. The process of case-hardening of high-chromium steels takes place at high temperature (950°C) and requires 15 hr. Under these conditions an equilibrium state, or that close to equilibrium, is reached, and a diffusion redistribution of chromium takes place. Case-hardening of 18KhGT steel takes place at lower temperature (920°C), and it requires only 6 hr. The initial state of 18KhGT steel corresponds to point C_0 . At the beginning of saturation the concentration corresponds to point C_1 . Then, as in the case of high-chromium steels, begins the stage

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of carbide formation (cementite). The formation and the growth of carbide particles causes the impoverishment (regarding carbon and chromium) of adjoining regions of austenite, which results in the decrease of general concentration of carbon in austenite. There are 9 figures.

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SHEPELYAKOVSKIY, K.Z., kand.tekhn.nauk; ZELENOVA, V.D., kand.tekhn.nauk;
OSTROVSKIY, G.A., inzh.

Structure and properties of an induction-hardened layer of steel.
Metalloved. i term. obr. met. no.9:24-29 S '62. (MIRA 16:5)

1. Moskovskiy avtomobil'nyy zavod (ZIL) i Gosudarstvennyy soyuznyy
ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy
avtomobil'nyy i avtomotornyiy institut.
(Steel—Metallography) (Induction hardening)

L 10690-63

EMP(q)/ZWT(m)/BDS--AFFTC/ASD--JD

ACCESSION NR: AP3001653

S/0129/63/000/006/0030/0035

AUTHOR: Zelenova, V. D.; Ostrovskiy, G. A.; Shepelyakovskiy, K.Z. 54

TITLE: Growth of austenitic grain in steel during induction heating

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 6, 1963, 30-35

TOPIC TAGS: austenitic grain, steel, induction heating, martensite steel, austenite steel

ABSTRACT: The initial austenitic grain, whose size depends on the dispersibility of the original structure, determines the grain size of steel made by induction heating. The rate of heating, from 8 to 1000 degrees per second does not affect size of the original grain; but further austenite growth is affected by heating rate. The rate of austenite growth increases with increasing temperature.

steel and of optimal inductive heating rates are the essential means for increasing the strength of machine parts. orig. art. has: 3 tables and 6 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 09Jul63 ENCL: 00

SUB CODE: 00

NO REF SOV: 010 OTHER: 003

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L 01929-67 EWT(m)/EWP(t)/ETI IJP(c) WB/JD

ACC NR: AR6031071 (N) SOURCE CODE: UR/0277/66/000/007/0013/0013

AUTHOR: Gulyayev, A. P.; Zelenova, Z. P.

TITLE: Study of resistance of austenitic steels to cavitation 4 413

SOURCE: Ref. zh. Mashinostr mat konstr i raschet detal. mash. Gidropr, Abs. 7.48.89

REF SOURCE: Sb. Kavitats. i gidroabrazivn. stoykost' met. v gidroturbinakh. M., Mashinostroyeniye, 1965, 71-74

TOPIC TAGS: steel, austenitic steel, stainless steel, cavitation resistance, martensite, magnetostriction oscillator

ABSTRACT: The effect of austenite transformation to martensite on the cavitation resistance of stainless steel samples was studied, using a magnetostriction oscillator. It is pointed out that due to the effect of cavitation in steels with unstable austenite martensite forms which increases the wear resistance of the steel. To decrease the stability of austenite in 0.2Kh10N9T and 0.4Kh10N9T steels and at the same time to increase their cavitation resistance, it is suggested that the nickel content be reduced from 8-9% to 7-8%. Orig. art. has: a bibliography of 3 reference items. [Translation of abstract] [AM]
Card 1/1 hs SUB CODE: 13/ UDC: 669.14.018.8:620.193.16

ZELENOVA, Ye.I., referent

Copper smelting plant in San Manuel (from "Journal of Metals"
no.9, 1957). Biul. TSIIN tevet. met. no.8:39-40 '58. (MIRA 11:6)
(San Manuel, Ariz.--Metallurgical plants)

ZELENOVSKIY, Ye.I.

Automatic timer for doffing on spinning machinery. Knit. volok. no.1:
24-26 '62. (MIRA 18:4)

ZELENSAKAYA, N.S.; MAYLING, L.; NEUDACHIN, V.G.; SMIRNOV, Yu.F.

Rules of selection for nuclear reactions involving nucleon
associations in the SU(3) scheme. IAd. fiz. 2 no.3:427-432
S '65. (MIRA 18:9)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo
universiteta.

ANDREYEV, K.P.; BOBOREKO, E.A.; IGNAT'YEV, I.S.; ZELENISHCHIKOV, A.V.;
BELYAYEVSKIY, I.A.; SHIRYAYEV, A.M.; SAPIRO, M.M.

Steam injection cooling of stillage. Gidroliz. i lesokhim. prom.
10 no.7:30-32 '57. (MIRA 10:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitnospirtovoy promyshlennosti (for Andreyev, Boboreko, Ignat'yeva, Zelenshchikova). 2. Leningradskiy godroliznyy zavod (for Belyayevskiy, Shirayev, Sapiro).
(Alcohol)

ANDREYEV, K.P.; ZELENISHCHIKOVA, A.V.; IVANOVSKIY, N.A.; PRAKH'YE, I.S.

Reducing steam consumption in the distillation of beer. Gidreliz.
i lesokhim. prem. 9 no.1:12-14 '56. (MIRA 9:6)

- 1.Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i
sul'fitno-spirtevoy promyshlennosti (for Andreyev, Zelenishchikova)
- 2.Syaz'skiy tsellyulozno-bumazhnyy kombinat (for Ivanevskiy, Prakh'ye).
(Distillation apparatus)

Zelenshchikova, A.V.

MeOH-ester-aldehyde mixt. 3 types of rectification were
examd. the existing 4-column rectification was found to be

UTENKOVA, V.A.; ZELENISHCHIKOVA, A.V.; KALYUZINYY, M.Ya.

Producing vitamin B₁₂ by cultivating propionic acid bacteria on
sulfate liquor. Vit. res. i ikh isp. no.5:73-81 '61. (MIRA 15:1)

1. Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-
spirtovoy promyshlennosti; Leningrad.

(CYANOCOBALAMINE) (PROPIONIBACTERIUM)

(SULFITE LIQUOR)

SVIRIDOV, V.V.; YEFANOVA, V.A.; ZELENUSHCHIKOVA, R.Kh.

New data on the Pre-Cambrian of the southern slope of the Voronezh Massif in the region of the Kazanskaya railroad station. Sov. geol. 8 no.5:113-115 My '65. (MIRA 18:7)

1. Tsentral'naya laboratoriya Volgo-Donakogo territorial'nogo geologicheskogo upravleniya.

ZELENSKA-CHELKOWSKA, Anna

An unknown plan of 1816 of organizing, at the Krakow Central College, institutes of agriculture, veterinary medicine, and mining. Kwart hist nauki i tech 7 no.4:499-529 '62.

ZELENSKAYA, A. G.

USSR/Chemical Technology. Chemical Products and their Application.
Glass. Ceramics. Construction Materials.

J-12

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27753

Author : G.V. Kukolev, A.G. Zelenskaya.

Inst :

Title : Sulphur in Metallurgical Dolomite.

Orig Pub: Sb. nauchn. rabot po khimii i tekhnol. silikatov. M.,
Promstroyizdat, 1956, 327-332.

Abstract: Conditions furthering the contamination of dolomite (D) with S during the process of D burning, as well as the influence of S on sintering of D are investigated. It is noted that all the additions accelerating the sintering of D (Fe_2O_3 , Al_2O_3 , TiO_2 , bauxite) impede the elimination of S considerably. The conditions of elimination of S from D are improved by introducing 5 to 10% of metallurgical D and up to 2% of sodium chloride into the slime of gypsum containing D, as well as by burning

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USSR/Chemical Technology. Chemical Products and their Application.
Glass. Ceramics. Construction Materials.

J-12

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27753

such D together with D poor in fluxes. A complete elimination of S is secured by using the optimum mixture, consisting of 66.5% of Nikitovskiy D, 28.5% of Yelenovskiy D and 5% of gypsum.

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SOLOMKO, V.P.; PANASYUK, V.D.; ZELENSKAYA, A.M.

Mutual solubility in the four-component system water - acetone -
ethanol - butanol. Zhur.prikl.khim. 35 no.3:628-633 Mr '62.
(MIRA 15:4)

1. Kiyevskiy gosudarstvennyy universitet.
(Acetone) (Ethyl alcohol) (Butyl alcohol)

A.C.S.

Refractories

Molding high-duty metallurgical and complicated coke-oven silica brick by the method of high-frequency vibration. G. V. KUZOLY, A. T. KUZNETSOVA AND Z. P. SHALOMER. *Ogneupory*, 1937, No. 8, pp. 810-24; abstracted in *Trans. Brit. Ceram. Soc.*, 42 [4] 26A (1943).—An account is given of developmental work on the vibration method of molding, initiated by the Institute of Refractories, Kharkov. Trials are described in which a full-scale experimental vibration machine was employed. The final version of the vibration method of molding, applied as a production process, retains the original sequence of operations and the pressing and vibration devices. See "Shaping . . ." *Ceram. Abs.*, 19 [1] 10 (1940).

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PROCESSES AND PROPERTIES INDEX																			
<p>ca</p> <p>Shaping by means of vibration as a method for improv- ing the properties of silica brick for coke ovens. U. V. Kutobov and A. T. Zelenkaya, <i>Coke and Chem. (U. S. S. R.)</i> 7, No. 12, 50-5 (1947); <i>Chem. Zvesti.</i> 1939, 1, 5020. —The app. is described briefly. It is possible by its use to manuf. high-grade brick. M. V. Condole</p> <p>19</p>																			
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ZELENSKAYA, R.T.

Kukulev, G. V., Zelenkaya, R. T., and Shalomeev, Z. R. Machine tool with vibrational and convective components actuated by the method of high-frequency vibration. *Trudy*, 5 (8) 510-21 (1937).—An account is given of developmental work on the vibration method of molding, initiated by the Institute of Refrigeration, Kharkov. Tests are described in which preliminary experimental values in machine was employed. The final version of the vibration method of molding, applied as a production process, shows the original sequence of operations and the present and vibration devices.

ZELENSKAYA, A.T.

✓

Kukolev, G. V., and Zeleuskaya, A. T. SHAPING BY VIBRATION AS A METHOD FOR IMPROVING THE PROPERTIES OF SILICA BRICK FOR COKE OVENS. *Coke and Chem. (U.S.S.R.)* 7 (12) 94-95 (1937). -- A brief description of the apparatus used is given. It is possible to manufacture high grade brick.

U.S. DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS
CARBON STEEL

SOV/137-57-6-9527

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr. 6, p 29 (USSR)

AUTHORS: Kukolev, G.V., Zelenskaya, A.T.

TITLE: On the Sulfur in Metallurgical Dolomite (O sere v metallurgicheskom dolomite)

PERIODICAL: Sb. nauch. rabot po khimii i tekhnol. silikatov. Moscow, Promstroyizdat, 1956, pp 327-332

ABSTRACT: A study is made of the reasons for contamination of dolomite (D) by S, and methods of purification are sought for Nikitovka and Yelenovka D of the following % compositions respectively: SiO_2 2.55 and 0.12, Al_2O_3 0.96 and 0.26, Fe_2O_3 0.20 and 0.34, MgO 20.55 and 19.62, CaO 29.5 and 33.9, P_2O_5 - and 0.04; SO_3 0.03 and —; losses on roasting 45.10 and 45.72. Roasting of D in shaft ovens, cupolas, and rotary ovens shows that in the 1st and 2nd of these alternatives roasting results in the S contents rising to 0.76% owing to the S in the fuel, but only in roasting in rotary ovens, where there is less direct contact between the D and the fuel, does the S content drop noticeably. A special equipment is used to study the reaction of

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On the Sulfur in Metallurgical Dolomite
 SO_2 and D in the 800-1500°C interval. Curves of S absorption by various dolomite mixtures, both with and without addition of gypsum, are presented. The concentration of SO_2 in the gas fluctuates between 0.9 and 10.7%. D intensively absorbs SO_2 at lower temperatures, but the S content drops as the roasting temperature rises. Addition of chromite (0.5-2%) and introduction of anthracite (0.4-15%) into the mixture failed to result in complete decomposition of the gypsum. Addition of finely ground metallurgical D (5-10%), inhibiting the onset of sintering, gave good results, and the S content was cut to 0.01-0.03%. The optimum mixture yielding good S removal, low porosity, and good resistance to hydration is the following: 66.5% Nikitovka D, 28.5% Yelenovka D, and 5% gypsum. The S enters the D from the fuel ash, the gas phase, and the raw material contaminated by gypsum. The best results of roasting are obtained in rotary ovens. As temperature is raised from 800 to 1500°, absorption of S by the D drops. The absorbed S is completely removed at 1700°. The factors inhibiting S removal are a strong reducing medium and the presence in the D of components increasing the amount of melt and impairing sintering (scale, Fe_2O_3 , Al_2O_3 , Cr_2O_3 , FeO_2 , and bauxite). Factors facilitating S removal are addition of 5-10% metallurgical D, introduction of up to 2% sodium chloride, and roasting of D rich in gypsum jointly with D poor in fluxing agents (such as that of Yelenovka).
 Card 2/2 P.V.

137-58-4-6492

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 23 (USSR)

AUTHORS: Kukolev, G. V., Zelenskaya, A. T.

TITLE: Proper Granular Constitution of Burnt Dolomite (O ratsional'-nom zernovom sostave obozhzhennogo dolomita)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n. -i. in-t ogneuporov, 1957, Vol 2, pp 73-83

ABSTRACT: The unit weight of the uncompressed dry granular material and the angle of repose of a mixture of 3 fractions of commercial burnt metallurgical dolomite (MD) was determined. The grain-size fractions were 20-12, 12-4, and 4-1 mm. The best results in terms of dry granular material weight (up to 1.93 g/cm³) were obtained for a mixture containing up to 20% of the 1-4 mm fraction. As grain size in the mixture rose, the angle of repose of the MD increased, attaining 29-30°. The velocities required for MD grains of the 0.5, 1.2 and 3 mm classes to "hover" were determined experimentally and by calculation. It was established that at the common rates of motion of the gases in the smelting space of an open-hearth furnace (10-15 m/sec), carry-off of MD grains is not to be expected if they

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Proper Granular Constitution of Burnt Dolomite

are ≥ 2 mm in size. A verification of the tendency of granular MD to hydration for 6-75 days showed that a mixture containing 20% 1-4 mm grains shows only 0.34% hydration in 40 days. At the Makeyevka Iron and Steel Mill, the walls and banks of 55-, 110-, and 130-t open hearth furnaces were provided with MD of the indicated grain composition. The MD consumption proved to be 25.2 kg/t steel, as against 32.2 kg/t for dolomite of 12-20 mm grain size. This work served as the basis for a re-examination of the engineering specifications for MD, with the result that the minimum grain size was lowered from 4 to 2 mm, yielding a 10-20% increase in the production of salable MD at dolomite plants.

S.G.

1. Dolomite--Properties--Determination

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SOV/81-59-9-32088

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 9, p 358 (USSR)

AUTHORS: Kukolev, G.V., Kivin, D.I., Zelenskaya, A.T., Lur'ye, M.A., Minskiy, Ya.M.

TITLE: Magnesite-Dolomite ¹⁵ Highly-Refractory Products

PERIODICAL: Sb. nauchn. tr. Vses. n.-i. in-ta ogneuporov, 1958, Nr 2 (49), pp 277 - 296

ABSTRACT: The manufacture of magnesite-dolomite products from clinkers with various content of dolomite (D) and magnesite (M) in the raw material mixture of the clinker has been studied. Satka M and Karagay D served as raw material; for binding CaO, crystalline quartzite and iron scale were introduced; for the stabilization of β - $2\text{CaO} \cdot \text{SiO}_2$ an addition of phosphorite ore was introduced. The composition of the magnesite-dolomite charge was so calculated that a high (~ 1) coefficient of saturation with lime was obtained. Four charges were prepared: I - the ratio of M to D = 1:1; I^F - the same with an increased content of scale, II and III with the ratio M to D = 1:2 and 2:1, respectively. Dried briquets from charges I, I^F and II were burnt in the rotating furnace

Card 1/2

Magnesite-Dolomite Highly-Refractory Products

SOV/81-59-9-32088

at 1,710 - 1,760°C and from charge III in the periodic furnace at 1,600°C; the burnt briquets were ground and from the powders (the grain composition is cited) products were formed and burnt: from charges I, I^P and II at 1,430°C, from charge III at 1,460°C. A part of the raw bricks were left for hydraulic hardening for obtaining bricks without burning. The bricks from all the charges, in spite of the low burning temperature, have a high density (porosity 8.12 - 14.1%), high mechanical resistance (5,000-1,050-1,310 kg/cm²) and a high temperature of deformation under load (the beginning of softening in I, I^P and II takes place at 1,670, 1,540, 1,630°C, respectively, in III at 1,700°C softening did not begin). The content of highly-refractory phases was 86 - 88%. After a storing of 75 days, bricks without burning have also a high deformation temperature (in III there was no deformation at 1,700°C). The test of magnesite-dolomite bricks carried out in the laying of columns of the front wall of 30-t open-hearth furnaces has shown that these bricks are a completely suitable refractory material for them.

V. Zlochevskiy

Card 2/2

131-58-6-8/14

AUTHORS: Kukolev, G. V., Kivin, D. I., Zelenskaya, A. T., Lur'ye, M. A.,
Minskiy, Ya. M.

TITLE: Water-Tight Magnesite-Dolomite Brick (Vodoustoychivyy magnazitodolomitovyy kirpich)

PERIODICAL: Ogneupory, 1958, Nr 6, pp. 270 - 274 (USSR)

ABSTRACT: The investigations carried out by the Institute for Refractory Products showed that by combining magnesite and dolomite in the raw mixture for clinkers it is possible to obtain products of high quality, which was proved in the papers by G. V. Kukolev and D. I. Kivin (Reference 1). In carrying out the present work clinkers were produced by means of burning a calculated and controlled finely ground mixture of dolomite, magnesite, quartzite and phosphorite. The finely ground mixtures were produced according to the wet process. In table 1 some results of the laboratory investigations are mentioned. In the VNIIO experimental works several tons of synthetic water-tight magnesit-dolomite clinkers were produced and of it burned and unburned bricks were made. Furthermore the production of the masses is described in

Card 1/3

Water- Tight Magnesite-Dolomite Brick

131.58.6-8/14

detail. The investigation of the samples after burning (tables 2 and 3) showed that the bricks of all masses showed a high density and mechanical strength notwithstanding the relatively low burning temperature. In testing the magnesite-dolomite as well as the usual magnesite bricks in practice the former proved to be of better quality. Thanks to the hydraulic hardening the unburned bricks showed after one day of storing a resistance to pressure of 63-83 kg/cm², after one month 294-340 kh/cm², and after 3 months 530-670 kg/cm², having good properties with all this. Furthermore a scheme for the production of magnesite-dolomite bricks is recommended and described in detail. The possibility and usefulness of vacuum filtering of the slip is proved by the work of G. Z. Dolgina (Reference 2). Unburned big magnesite-dolomite blocks can be produced of burned clinker powders in the villages where they are needed. For the metallurgy in the South, Siberia and other districts the production of bricks can be based on the mixture of dolomite and caustic magnesite with additions. These methods are also to be made use for saving magnesite and chromite ores. The production of unburned fire-proof magnesite-dolomite products is to be organized in the works

Card 2/3

Water-Tight Magnesite-Dolomite Brick

131-58-6-8/14

departments for refractory products in the Ural mountains, on the condition that the ready magnesite-dolomite powder of the "Magnesit" will be supplied. Their production of the same burned and unburned products is to be organized in the Nikitovka dolomite Kombinat of dolomite and caustic magnesite with additions. The staff of editors of the periodical remarks on this in reference 3 that first of all a testing of these products of a great industrially produced amount of such bricks would be necessary. There are 3 tables and 2 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut ogneporov
(All-Union Scientific Research Institute for Refractories)

1. Refractory materials--Production
2. Refractory materials--Analysis
3. Refractory materials--Test results

Card 3/3

KARYAKIN, L.I.; ZELENSKAYA, A.T.

Alteration of quartz porphyry due to heating. Dokl. AN SSSR 136
no. 2:434-436 '61. (MIRA 14:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneporov.
Predstavleno akademikom N.V. Belovym.
(Armenia—Porphyry) (Refractory materials)

ZHIKHAREVICH, S.A.; ZELENSKAYA, A. SAFRONOVA, I.P.; ZOZULYA, I.S.;
VITRENKO, P.M.; CHERNYAVSKAYA, Z.Ya.; ABRAMOVICH, A.M.

Production and service of graphite containing inserts. Ogneupory
29 no.12:536-540 '64. (MIRA 18:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (for
Zhikharevich, Zelenskaya, Safronova). 2. Konstantinov kiy
ogneupornyy zavod "Krasnyy Oktyabr'" (for Zozulya, Vitrenko,
Chernyavskaya, Abramovich).

SMIRNOVA, L.A.; SERGEYEVA, T.I.; MEN', M.L.; BONDARYUK, A.S.; KAGARLITSKAYA,
E.A.; DUBOVIK, V.E.; YAROSH, A.P.; ZELENSKAYA, G.E.

In memory of T.M. Stepanov. Khirurgiia no.4:91-92 Ap '53. (MLRA 6:6)
(Stepanov, T.M., 1880-1951)

ZELENSKAYA, G. G., (ENGR.)

Dissertation: -- "Sectional Calender Rolls From Pressed Cotton." Cand Tech Sci,
Moscow Textile Inst., 17 Jun 54. (Vechernyaya Moskva, Moscow. 8 Jun 54)

SO: Sum 318, 23 Dec. 1954

ZALMANZON, Ya.S.; ZELENSKAYA, G.G.; NEBAROV, V.N.

Designing an automatic bleaching department. Tekst. prom. 18
no.8:43-45 Ag '58. (MIRA 11:10)

1. Rukovoditel' mekhaniko-energeticheskoy laboratorii Ivanovskogo nauchno-issledovatel'skogo tekstil'nogo instituta (for Zalmanson).
 2. Zaveduyushchiy laboratoriyey otdelochnykh mashin Vsesoyuznogo nauchno-issledovatel'skogo instituta tekstil'nogo i legkogo mashinostroyeniya (for Zelenskaya).
 3. Rukovoditel' khimiko-tehnologicheskoy laboratorii Tsentral'nogo nauchno-issledovatel'skogo instituta khlopkhatobumazhnoy promyshlennosti (for Nubarov).
- (Bleaching) (Textile factories)

KOROL'KOV, N.V. KOKOREV, V.A., inzh.; ZELENSKAYA, G.G., kand. tekhn. nauk

From the Manchester Textile Machinery Exhibition. Tekst. prom.
19 no.9:67-80 S '59. (MIRA 12:12)
(Manchester--Textile machinery--Exhibitions)

ZELENSKAYA, G.G., inzh.

All-Union conference on over-all mechanization and automation of
production in the textile industry. Mekh.i avtom.proizv. 15
no.4:59-61 Ap '61. (MIRA 14:5)
(Textile industry--Technological innovations)
(Automation--Congresses)

ZELENSKAYA, G.G., kand. tekhn. nauk; SIBIRTSEV, S.L., inzh.

New equipment and techniques of the finishing processes.

Tekst. prom. 23 no.7:10-15 JI '63.

(MIRA 16:8)

1. Glavnyy spetsialist po avtomatizatsii i oborudovaniyu otdelochnogo proizvodstva Gosudarstvennogo komiteta mashinostroyeniya pri Gosplane SSSR (for Zelenskaya). 2. Starshiy ekspert Gosudarstvennogo komiteta mashinostroyeniya pri Gosplane SSSR (for Sibirtsev).

(Textile finishing) (Textile machinery)

KON'KOV, Aleksey Ivanovich; ZEL'DIN, Yuliy Rafailovich; KURGIN,
Yuriy Mikhaylovich; KOZLOVSKIY, Sergey Dmitriyevich;
KON'KOVA, Mayya Borisovna; BUDANOV, Konstantin
Dmitriyevich; BELEN'KIY, L.I., retsenzent; ABRAMOV, S.A.,
retsenzent; ZELEN'SKAYA, G.G., retsenzent; SIBIRTSEV, S.L.,
retsenzent; VERBITSKAYA, Ye.M., red.

[Equipment for the finishing operations in the textile
industry] Oboorudovanie etdelcel'nogo proizvodstva tekstil'-
noi promyshlennosti. Moskva, Legkaia industriia, 1964.
417 p. (MIRA 18:1)

YURGENSON, A.A.; ZELENSKAYA, G.I.; ASSONOV, A.D., doktor tekhn.
nauk, retsenzent

[Metals for high-speed diesel engines and their heat treatment; a manual] Metally bystrokhodnykh dizelei i ikh termicheskaya obrabotka; spravochnoe posobie. Moskva, Izd-vo "Mashinostroenie," 1964. 266 p. (MIRA 17:7)

ZELENSKAYA, G.I., inzh.; NOROVA, L.I.; YIRGENSON, A.A.

Materials and the heat treatment of crankshafts for high-speed
diesels. Metalloved.i term.otr.met. no.4:56-58 Ap '62.

(MIRA 15:4)

(Crank and crankshafts) (Steel-Heat treatment)

SMIRNOVA, L.A.; SERGEYEVA, T.I.; MEN', M.L.; BONDARYUK, A.S.; KARARLITSKAYA, Ye.A.;
DUBOVIK, V.Ye.; YAROSH, A.P.; ZELENSKAYA, G.Ye.

In memory of T. M. Stepanov. Khirurgiia, Moskva no.4:91-92 Apr 1953.
(CML 24:4)

1..Obituary.

ZELENETSKAYA, I.S., kand.tekhn.nauk; ABRAMOV, V.V., inzh.

Use of fuel and lubricants obtained from sour crude for diesel locomotives. Zhel.dor.transp. 43 no.2:41-44 F '61. (MIRA 14:4)
(Diesel fuels)

ZELENSKAIA, K. V.

Standards for Leghorn, Rhode Island Red chickens and Peking ducks. Moskva, Pishchepromizdat, 1939. 91 p. At head of title: NKZ RSFSR. Nauchno-issledovatel'skii institut ptitsevodstva. K. V. Zelenskaia, S. G. Petrov, IA. IA. Shapovalov.

ZELENSKAYA, K. V.

Zelenskaya, K. V. "Determining the sex of goslings," Trudy Nauch.-issled. in-ta
ptitsevodstva, Vol.XIX, 1948, p.45-49

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

ZELENSKAYA, K. V.

ZELENSKAYA, K. V. "Kholmogor geese and their importance in the development of Russian goose raising," (A candidate's dissertation), Trudy nauch.-issled. in-ta ptitsevodstva, Vol XX, 1948 (on cover: 1949), p. 5-119, - Bibliog: 56 items

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal Statey, No. 25, 1949).

PENIONZHKEVICH, Erast Erastovich, prof.; ZELENSKAYA, Klavdiya Vasil'yevna,
kand.sel'skokhoz.nauk; DOBYCHINA, I.N., red.; ZUERILINA, Z.P.,
tekhn.red.

[Raising geese] Razvedenie gusei. Izd.3., perer. Moskva, Gos.
izd-vo sel'khoz.lit-ry, 1960. 92 p. (MIRA 13:11)
(Geese)

ZELENOVSKAYA, L.B.

Standardization of auxiliary mining equipment is desirable.
Shakht.stroi. no.11;31 N '59. (MIRA 13:3)

1, Starshiy inzhener otdeleniya glavnogo mekhanika tresta
Stalinskakhtostroy.
(Mining engineering--Equipment and supplies)

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A006/A001

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Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 15, p. 15, # 60234

AUTHORS: Zelenskaya, L.G., Tunitskiy, L.N.

TITLE: Investigation of a Discharge Spectrum in BF₃ in Vacuum Ultraviolet

PERIODICAL: Fiz. sb. L'vovsk, un-t, 1957, No. 3 (8), pp. 489-493

TEXT: А.И.Ф. -5 (DPS-5) vacuum spectrograph (2.7 Å/mm dispersion) was used to investigate the discharge emission spectrum in BF₃. The rotational structure of two bands in the 1700-1900 Å range was determined. The bands must according to Cretenin's data (Cretenin, Helv. phys. acta, 1950, Vol. 23, p. 259) belong to the $2\Pi - 2\Sigma$ transition of the BO molecule, appearing as a contamination. As a result of rotational analysis it is shown that it is probably wrong to relate these bands to the BO molecule, and they are related to the $1\Pi - 1\Pi$ or $2\Sigma - 2\Sigma$ transition of some hydrogen compound. Rotational constants B' and B' ≈ 8.7 cm⁻¹ Å are determined.

A. Mal'tsev

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

ZELENSKAYA, L.G.; TUNITSKIY, L.N.

Study of the ultraviolet portion of BF_3 spectrum in vacuum
discharge. Fiz. sbor. no.3:489-499 '57. (MIRA 11:8)

1. Khimicheskiy fakul'tet Moskovskogo ordena Lenina i ordena
Trudovogo Krasnogo Znameni gosudarstvennogo universiteta im.
M.V. Lomonosova.

(Boron fluoride--Spectra)

ZELENSKAYA, L.G.; IOGENSEN, A.V.; KURKCHI, G.A.

IKS-12 infrared spectrometer for the quantitative determination of products in the manufacture of caprolactam. Zav.lab. 25 no.3:299-300 '59. (MIRA 12:4)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.
(Chemistry, Analytical)
(Spectrometer)

ZELENSKAYA, I.G.; IOGANSEN, A.V.; ROMANTSOVA, G.I.

Characteristic bands of some chloroalkanes and chloroalkenes.
Izv. AN SSSR.Ser.fiz. 26 no.10:1272-1275 0 '62. (MIRA 15:10)
(Paraffins—Spectra) (Olefins—Spectra)

ZELENSKAYA, L.G.; IOGANSEN, A.V.; KURKCHI, G.A.

Measurements with the IKS-12 infrared spectrometer. Zav.lab. 79
no.4:433-437 '63. (MIRA 16:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut azotnoy
promyshlennosti i produktov organicheskogo sinteza.
(Spectrometry)

ZELENSKAYA, L.G.

PRIKHOT'KO, A.F.

24(7) p.3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizichnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Jazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Lanyatberg, G.S., Academician (Resp. Ed., Deceased), Naporent, B.B., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabelinskiy, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayevskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanduk, V.B., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Rutyrkin, V.N., Sh. I. Feyzulayev, and L.N. Tunitskiy. Study of Spectrum of BeF 486

Zelenskaya, L.G., and L. N. Tunitskiy. Study of the Spectrum of a BF₃ Vacuum Discharge in the Ultra-violet 489

Veselago, V.G., and A.M. Frokhtov. Micro-wave Spectrum of a HD₃ Molecule 493

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Card 30/30

5(3)

SOV/32-25-3-15/62

AUTHORS:

Zelenskaya, L. G., Iogansen, A. V., Kurkoli, G. A.

TITLE:

Quantitative Determinations of the Products of Caprolactam-production on the Infra-red Spectrometer IKS-12 (Kolichestvennyye opredeleniya produktov proizvodstva kaprolaktama na infrakrasnom spektrometre IKS-12)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, pp 299 - 300 (USSR)

ABSTRACT:

A lecture was held on this problem at the XII Vsesoyuznoye soveshchaniye po spektroskopii (XII All-Union Conference of Spectroscopy) in Moscow in November 1958. For analysing several products of the caprolactam-production infra-red spectroscopy was used in the case under discussion (Table). The investigations were carried out on the spectrometer IKS-12 which had an amplifier assembly FEOU-18 and an electronic recording potentiometer EPP-09. The tests were carried out according to the method of measuring "in point" (Ref 1); thus the value

$\lg \frac{I_0}{I}$ could be reproduced with an accuracy of $\pm 1\%$

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Quantitative Determinations of the Products of SOV/32-29-3-15/62
Caprolactam-production on the Infra-red Spectrometer IKS-12

and the measurements could be accelerated. The concentration of the components was graphically determined from calibration curves. For determining cyclohexane (I) and methylcyclopentane (II) the method of a metallic interval standard, the method of a metallic wire screen (Ref 2) was used. Thus the content of the basic component (I) could be determined up to 0.4% relatively precisely as well as small amounts of the slightly absorbable component (II) (up to 0.15% precisely). Cuvettes of NaCl (liquids) and cuvettes protected by phthoroplast (for NO_2 and aggressive components) were used for the tests. Duration of the analysis: 15 minutes to 1.5 hours. There are 1 table and 2 references.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza (State Scientific Research and Planning Institute for Nitrogen Industry and Products of Organic Synthesis)

Card 2/2

IOGENSEN, A.V.; ZELENSKAYA, I.G.; SEMINA, G.N.; Prinimali uchastiyes;
ABRAMOVA, M.P.; BALLYA-NIKOVA, L.V.

Composition of the products of the oxidation of cyclohexane.
Khim. prom. 42 no.9:660-661 S '65. (MIRA 18:9)

Treatment of converter gases with recovery of rhenium

TECHNICAL: Tsvetnyye metally, no. 4, 1963, 83 - 84

TEXT: The paper reports the results of tests on experimental plant designed for efficient purification of converter gases and recovery of rhenium. The plant consisted of two cyclons working in parallel, first and second dry electrofilters, and a wet electrofilter. The plant ensured catchment of 90.75% of the

converter gases and recovery of rhenium. The plant was tested with

converter gases from a converter. The wet electrofilter

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Treatment of

S/136/63/000/004/005/004

2195/2585

4) recovery of Re from the leaching solutions by the adsorption method. There is 1 table.

Key to table: 1 - component; 2 - dust from the cyclons;
3 - dust from dry electrofilters; 4 - composition,
%; 5 - dust from wet electrofilters.

(1) Компо- нент	(2) Пыль циклонов	Пыль сухих электрофильтров		Пыль мокрого электро- фильтра
		1	11	
		Содержание, %		
Zn	1,59	6,66	6,55	0,43
Cu	40,5	0,64	0,69	0,28
Pb	14,7	53,36	55,33	63,23
Cd	0,005	0,25	0,27	0,14
Re	0,008	0,03	0,023	0,006
As	0,01	0,26	0,27	0,15
Sb	0,0015	0,003	0,003	0,004

Card 2/2

S/136/63/000/003/001/004
E193/E383

AUTHORS: Kershanskiy, I.I. and Zelenskaya, L.I.

TITLE: High recovery of rhenium during electrothermic processing of raw copper concentrates

PERIODICAL: Tsvetnyye metally, no. 3, 1963, 50 - 59

TEXT: The object of the present paper was to demonstrate that the difficulties encountered in attaining complete recovery of rhenium present in quantities of up to 40 g/t in some copper concentrates can be overcome by using electric instead of reverberating furnaces for smelting and refining the concentrate. To this end, the authors describe operational experience accumulated at various plants, in which the electrothermic process developed at VNIITsvetmet is used. The data, quoted in tabulated form, include the following: concentration and distribution of rhenium in the products of smelting operations; distribution of rhenium losses at various stages of this smelting process; characteristics of the gases and dusts produced during smelting of granulated concentrate; the effect of the composition of the revert solution on the concentration and distribution of rhenium

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High recovery of

S/136/63/000/003/001/004
E193/E383

in the products of wet purification of furnace gases; concentration and distribution of rhenium in the products of smelting of furnace dusts; concentration and distribution of rhenium in the products of dust-catching operations during the converter-smelting of copper-rich mattes; chemical composition of dusts and slags; concentration and distribution of rhenium during hydro-metallurgical treatment of secondary dusts and slimes; concentration and distribution of rhenium in the products of leaching of converter dusts and wet electrofilter slime; characteristics of the rhenium-bearing solution to be treated by adsorption on activated charcoal; rhenium-adsorption capacity of activated charcoal as a function of the Na_2CO_3 and KMnO_4 content of the solution. Conclusions: 1) if electrosmelting is used for processing raw, rhenium-bearing copper concentrates, 90% of the rhenium present in the concentrate can be recovered in the final product (sodium perrhenate). 2) In smelting rhenium-bearing copper concentrates 60-70% of the rhenium finds its way to the gaseous phase, the remainder being concentrated in the matte; the proportion of rhenium found in the slags is negligible. When the
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S/136/63/000/003/001/004
E193/E383

High recovery of

matte is smelted in a converter, the entire rhenium content is driven off with the gaseous phase. No rhenium has been found in crude copper and only traces in the converter slags. 3) A wet gas-purifying process, in which a dry cyclon, scrubbers (with and without checkers) and wet electrofilters are used, provides a means of recovering 99.8% rhenium from the gaseous phase. 4) The possibility has been established of combining the recovery of rhenium from the gaseous phase with the leaching operation. Maximum recovery (more than 90%) of rhenium in the solution is attained with a solution containing 1 g/l. KMnO_4 . 5) The bulk of rhenium losses is noted in lead cakes which, consequently, have to be further treated to recover the rhenium. This treatment is best carried out at a copper-smelting plant equipped for the recovery of rhenium as a by-product. There are 11 tables.

Card 3/3

SNURNIKOV, A.P.; ZELENSKAYA, L.I.

Testing and using capron filter cloth in nonferrous metallurgy.
TSvet. met. 33 no.8:47-49 Ag '60. (MIRA 13:8)
(Hydrometallurgy) (Filters)

SOV/136-59-5-11/21

AUTHORS: Snurnikov, A.P., and Zelenskaya, L.I.
TITLE: Testing Filter-Thickeners for Filtering Neutral Zinc-Cinder Leaching Slurries (Ispytaniye fil'trov-sgustiteley na fil'tratsii neytral'nykh pul'p ot vyshchelachivaniya tsinkovogo ogarka)

PERIODICAL: Tsvetnyye metally, 1959, Nr 5, pp 54-58 (USSR)

ABSTRACT: At present neutral slurries at all Soviet zinc works are allowed to settle in thickeners. The authors outline the drawbacks of these units (although their performance can be greatly improved, Refs 1, 5, 10) and the relative advantages of filtration. Filter thickeners have been used abroad and, in recent years, at the Volkhovskiy alyuminiyevyy zavod (Volkhov Aluminium Works). The authors describe their experiments which showed that zinc slurry can be filtered with caprone cloth. In laboratory experiments (Fig 1), a filter of caprone cloth over caprone mesh was used with a core filtering area of 245 cm² and connected with a vacuum of 680-740 mm and compressed air at 0.5 atm gauge. Fig 2 shows the rate of filtration, m³/m² hr (curve 1) and the solid-content of the filtrate, g/litre plotted against duration of filtration, seconds. The experiments having shown

Card 1/3

SOV/136-59-5-11/21

Testing Filter-Thickeners for Filtering Neutral Zinc-Cinder
Leaching Slurries

the suitability of the equipment, the work was increased in scale and transferred to the Ust'-Kamenogorskiy svintsovotvornyy kombinat (Ust'-Kamenogorsk Lead-Zinc Combine). Here a Mekhanobr-designed, 1-m² filtering area filter-thickener (Fig 3) was used, with a suction of 500-600 mm Hg or a pressure of 0.9-1.2 atm gauge. Samples of slurry for filtration were taken (Fig 5) after the agitator and after removal of sands. The filtration rate in the former case was 1.16 m³/m² hr with 0.8 g/litre of solid in the filtrate and a solid : pulp ratio of 0.57 : 1 in the thickened pulp. This corresponds to a treatment rate per unit floor space about 40 times that with thickeners. Disadvantages of filtration include filter-cloth consumption and high maintenance labour requirements. The authors mention that final conclusions on filtration will be possible after tests with 4.3-m diameter filters (80 m² filters

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SOV/136-59-5-11/21

Testing Filter-Thickeners for Filtering Neutral Zinc-Cinder
Leaching Slurries

area) at the Ust'-Kamenogorsk Lead-Zinc Combine.
There are 5 figures and 10 references, 8 of which are
Soviet and 2 English.

Card 3/3

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MURAVIN, Ya.G.; ZELENSKAYA, L.N.; GLUZ, D.S.

Determining the air permeability of plastic packing materials. Kons. i
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(Food--Packaging)

(Plastics--Testing)

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[Medical microbiology] Meditsinskaja mikrobiologija. izd. 3, ispr.
i dop. Moskva, Medgiz, 1958. 379 p. (MIRA 11:10)
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Some cases of moniliasis of the internal organs. Vrach. delo
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L.N. Zelneskaya) Stalingradskogo meditsinskogo instituta.
(MONILIASIS)

MURAVIN, Ya.G.; ZELENSKAYA, L.N.; PUGACH, G.D.

Use of high polymer packaging materials in food preservation by
means of ionizing. Kons. i cv.prom. 17 no.4:24-27 Ap '62.
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1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i
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ZELENSKAYA, L. N.; SIDOROVA, N. I.;

"The 'Sanatsiya' [Elimination of Bacilli] in Cases of Diphtheria Infection and of Diphtheria Bacillus Carriers by Using a Bacillus prodigiosus Suspension," Tezisy Dokladov 12-y Nauchnoy Sessi Stalingradskogo Meditsinskogo Instituta, Stalingrad, 1952, pp 32, 33.

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1. Predsedatel' zavkoma Nizhne-Tagil'skogo metallurgicheskogo kombinata (for Sakontsev).
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(Nizhniy Tagil--Steel industry--Hygienic aspects)

ZELINSKAYA, M.G., Cand Chem Sci—(diss) "Study in the field of α -vinyl lactams." Mos, 1958. 19 pp (Acad of Sci USSR. Inst of Organic Chemistry in H.D. Zelinskiy), 110 copies. ~~Bibli-~~ List of author's works at end of text (10 titles) (ML,22-58,102)

-19-

ZELENSKAYA, M. G.

Chemical Abst
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

③ Chem
/ Synthesis and polymerization of vinylcarbazole / M. P.
Shostakovskii, N. A. Medvedkova, and M. G. Zelen-
skaya. Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci. 1952,
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ZELENSKAYA, M. G.

Chem Abs

U.47 25 Jan 54

Organic Chem

Vinyl gualacyl ether. M. P. Shostakovskij, V. P. Shishkov, and M. G. Zelenkaya. Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintezy Org. Soedinenii, Sbornik 2, 37-8 (1952); cf. C.A. 38, 330. To an autoclave with 400 g. gualacol, 40 g. KOH, and 40 ml. H₂O is added C₂H₄ to 15-18 atm., the vessel heated with agitation to 180-200° until C₂H₄ absorption ceases. C₂H₄ is again admitted and the process repeated until the reaction stops. After steam distn. the product is redistd. yielding 62% o-MeOC₂H₅. OCH: C₂H₅, bp 112-13°, d₄ 1.0048, n_D 1.6350. If H₂O is omitted, the yield drops and tars are formed. The app. must not contain Cu or Ag parts in contact with C₂H₄. G. M. Kosolapoff

ME
7-14-54

ZELENSKAYA, M. G.

chem

Chem Abs V48

1-25-54

Organic Chemistry

N-Vinyl-ε-caprolactam. M. P. Shostakovskii, N. A. Medvedevskaya, and M. G. Zelenskaya. *Akad. Nauk S.S.S.R., Izv. Org. Khim., Siniy Org. Soedinenii, Sbornik* 2, 44-5 (1952); cf. C.A. 38, 330*. ε-Caprolactam (28 g.) is allowed to react with 9.7 g. K at 60-80° in 150 ml. MePh. The mixt. is charged into an autoclave with 188 g. caprolactam and 200 ml. MePh and the app. is charged with C₂H₄. With agitation the autoclave is heated to about 100° (max. temp. 125°) until reaction ceases, after which a fresh portion of C₂H₄ is admitted. The process is repeated until absorption ceases. Distn. gave 71% N-vinyl-ε-caprolactam, m. 34-5°, b. 85°, b₁ 131-2°. The K in the prepn. can be replaced by Na. No Cu or Ag parts of the app. must come in contact with C₂H₄. G. M. Kosolapoff

APF
7-19-54

ZELENSKAYA, M. G.

USSR/Chemistry - High-Molecular Compounds Jul/Aug 52

"Synthesis and Polymerization of Vinylcaprolactam," M. F. Shoetakovskiy, N. A. Medzykhovskiy, M. G. Zelenskaya, Inst of Org Chem, Acad Sci USSR "Iz Ak Nauk SSSR. Otdel Khim Nauk" No 4, pp 682-689, 1952

Parallel to investigations on vinylpyrrolidone, authors carried out work on vinylcaprolactam (I) and its polymers, because this product is made from industrial raw material that is more easily accessible in the USSR. Found conditions under which I is obtained with a yield of ~70%. In the vinylation of ϵ -caprolactam (II) with acetylene, used as a catalyst "K salt of II, i. e., product of the interaction of potassium metal with II. Upon synthesis, I crystallizes readily. Hydrolysis of I leads to acetaldehyde, II, and salt of ϵ -aminocaproic acid. Polymerization of I proceeds well in the presence of hydrogen peroxide after heating to 140-150°. Isolated cryst product of reaction of I with O₂. This product may serve as peroxidic initiator of polymerization of I. Polymerization of I under the action of heat does not take place.

PA 229T17

ZELENSKAYA, M. G.

USSR/Chemistry - High Molecular Compounds Jul/Aug 52

"Synthesis and Transformations of Vinylcaprolactam. I. Polymerization in the Presence of Hydrogen Peroxide," M. F. Shostakovskiy, F. P. Sidel'kovskaya, M. G. Zelenskaya, Inst of Org Chem, Acad Sci USSR "Iz Ak Nauk SSSR, Otdel Khim Nauk" No 4, pp 690-695, (1952)

Using undild acetylene (authors state that this is the procedure customary in the USSR as distinguished from foreign practice), the authors vinylated caprolactam. They found that the Na salt of caprolactam (product of interaction of Na metal with caprolactam) is a suitable catalyst for the vinylation. They state that it is safer to use Na salt than K salt. They investigated polymerization of vinylcaprolactam in the presence of H_2O_2 at temps in the range 100-150° and found that with higher temps the rate of polymerization increases, while the quantity of catalyst that is needed drops.

PA 229T18

SHOSTAKOVSKIY, M.F.; ZELENSKAYA, M.G.

Properties and transformations of vinyl guaiacyl ether. Zhur. Priklad.
Khim. 25, 1221-5 '52. (MLRA 5:11)
(CA 47 no.17:8678 '53)

USSR/ Chemistry Hydrolysis

Card 11/1 Pub. 40 - 17/57

Authors Ch. Stakivskiy, M. P., Stakivskaya, F. P., and Zelenskaya, M. G.

Title Hydrolysis of vinyl acetate in an acid medium

Periodical Izv. AN SSSR, Khim. nauk 1, 689 - 693, July - August 1954

Abstract Hydrolysis of vinyl acetate and vinylpyrrolidone, was investigated in an acid medium. The reaction was catalyzed by acids and metal ions. The rate of hydrolysis was determined by the method of initial rates.

Institution : Acad. of Sc. USSR, The N. S. Zelenskiy Institute of Organic Chemistry

Submitted : May 8, 1953

ZELENSKAYA, M. B.

SHOSTAKOVSKIY, M.F.; SIDEL'KOVSKAYA, F.P.; ZELENSKAYA, M.G.; MORGUNOVA, Ye.S.

Polymerization of vinyl lactams. Soob.o nauch.rab.chl.VKHO
no.3:5-8 '55. (MIRA 10:10)

(Polymerization) (Lactams)

SHOSTAKOVSKIY, M.F.; SIMELE'KOVSKAYA, F.P.; ZELENSKAYA, M.G.

Use of the iodoform reaction in the analysis of certain vinyl compounds.
Izv.AN SSSR Otd.khim,nauk no.5:615-621 My '56. (MLRA 9:9)

1.Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR.
(Iodoform) (Vinyl compounds)

POPOVSKIY, V. G.; GIDALEVICH, M. G.; DUL'NEVA, I. P.; Prinimali
uchastiye: ZELENSKAYA, M. I.; SHCHELOKOVA, I. M.

Tartar crystallization during partial freezing of grape juice.
Trudy MNIIPP 1:89-98 '61. (MIRA 16:1)

(Grape juice) (Crystallization)

ZEL'ENSKAYA, M. G.

AUTHORS:

Shostakovskiy, M. F., Sidel'kovskaya, F. P.,
Zelenskaya, M. G.

62-11-24/29

TITLE:

Investigations in the Field of Lactones and Lactames. (Issledovaniye v oblasti laktonov i laktamov). 8. Report. Preparation of Polyvinylpyrrolidone with Protracted Action (Soobshcheniye 8. Polucheniye preparata polivinilpirrolidona prolongiruyushchego deystviya).

PERIODICAL:

Izvestiya AN SSSR, Otdel. Khim. Nauk, 1957, Nr 11, pp. 1406-1408 (USSR)

ABSTRACT:

The task of the present paper was the production of polymers of the vinylpyrrolidone with relatively high molecular weight, discovering the characteristics for an active preparation in extended view and ascertaining the conditions for the production of it. For this purpose the polymerization of the vinylpyrrolidone under presence of H_2O_2 and of the azoisobutyric-acid-dinitril as well as in a aqueous solution under the influence of H_2O_2 was investigated. It is shown that in the presence of azoisobutyric-acid-dinitril the polymerization takes place at a lower temperature but also much slower than in a polymerization with H_2O_2 . The polymeride developping on this occasion show a much higher viscosity, but have no colour or odour. The polymeride obtained at more than 100° almost always have an unpleasant scent and a yellowish colour. The polymerization under H_2O_2 -influence in a

Card 1/2